

AIR RESOURCES BOARD	TOYOTA MOTOR CORPORATION	EXECUTIVE ORDER A-014-0421 New Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles
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Pursuant to the authority vested in the Air Resources Board by Health and Safety Code (HSC), Div. 26, Part 5, Chap. 2; and pursuant to the authority vested in the undersigned by HSC Sections 39515 and 39516 and Executive Order G-45-9;

IT IS ORDERED AND RESOLVED: That the following exhaust and evaporative emission control systems produced by the manufacturer are certified as described below. Production vehicles shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	TEST GROUP	VEHICLE TYPE	EXHAUST EMISSION STANDARD CATEGORY	FUEL TYPE
2002	2TYXT02.0FFH	0-3750 Pounds Loaded Vehicle Weight Light-Duty Truck	Low Emission Vehicle (LEV)	Gasoline
No.	EVAPORATIVE FAMILY (EVAP)	No.	SPECIAL FEATURES & EMISSION CONTROL SYSTEMS (ECS)	* = not applicable
1	2TYXR0115AK1	1	2TWC, 2HAFS, 2HO2S, SFI, OBD (P)	
2	*	2	*	
3	*	3	*	
4	*	4	*	

TWC = 3-way catalytic converter WUTWC = warm-up TWC
 ADSTWC = adsorber TWC O2S = oxygen sensor
 HO2S = heated O2S AFS = air / fuel sensor (aka. universal O2S)
 HAFS = heated AFS EGR = exhaust gas recirculation
 AIR = secondary air injection PAIR = pulsed AIR
 MFI = multiport fuel injection SFI = sequential MFI
 TC/SC = turbo/super charger CAC = charge air cooler
 OBD (F) / OBD (P) = on-board diagnostics; full / partial compliance
 (prefix) 2 = parallel (2) (suffix) = series

EVAP No.	ECS No.	ENGINE SIZE (L)	VEHICLE MAKES & MODELS	VEHICLES SUBJECT TO SFTP STANDARDS ARE UNDERLINED
1	1	2.0		Toyota: RAV4 (2WD and 4WD)
*	*	*		*
*	*	*		*
*	*	*		*

The exhaust and evaporative emission standards (STD) and certification emission levels (CERT) for the listed vehicles are as follows. Any debit in the manufacturer's compliance plan for "NMOG Fleet Average" (passenger cars and light-duty trucks) or "Vehicle Equivalent Credit" (medium-duty vehicles) shall be equalized as required. The 50° Fahrenheit standards and CERT levels are listed below or compliance has been met based on the manufacturer's submitted compliance plan in lieu of actual testing.

NMOG FLEET AVERAGE [g/mi]		NMOG [g/mi] @ RAF = 0.94 CH4 RAF = *		CH4 = methane NOx = oxides of nitrogen		NMOG = non-CH4 organic gases HCHO = formaldehyde		NMHC = non-CH4 hydrocarbons PM = particulate matter		CO = carbon monoxide RAF = reactivity adjustment factor						
CERT	STD			CO [g/mi]		NOx [g/mi]		HCHO [mg/mi]		PM [g/mi]		Hwy NOx [g/mi]				
0.061	0.068	CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD			
K = 1000 miles	@ 50K	0.048	0.075	1.3	3.4	0.1	0.2	0.4	15	*	*	0.1	0.3			
	@ 100K	0.061	0.090	2.2	4.2	0.2	0.3	0.5	18	*	*	0.1	0.4			
	@ 50°F, 4K	0.105	0.150	0.8	3.4	0.1	0.2	1	30	*	*	*	*			
CO [g/mi] @ 20°F, 50K		g = gram mg = milligram mi = mile		NMHC+NOx [g/mi] (composite)		NMHC+NOx [g/mi] [US06]		CO [g/mi] [US06]		NMHC+NOx [g/mi] [SC03]		CO [g/mi] [SC03]				
CERT	STD			CERT	STD	CERT	STD	CERT	STD	CERT	STD					
2.7	10.0					*	*	*	*	*	*	*	*			
F = degree Fahrenheit		@ 4K		*	*	*	*	*	*	*	*	*	*			
		@ 100K		*	*	*	*	*	*	*	*	*	*			
@ 100K	EVAPORATIVE FAMILY 1				EVAPORATIVE FAMILY 2				EVAPORATIVE FAMILY 3				EVAPORATIVE FAMILY 4			
	3-D	2-D	RL	ORVR	3-D	2-D	RL	ORVR	3-D	2-D	RL	ORVR	3-D	2-D	RL	ORVR
	CERT	0.4	0.4	0.02	0.10	*	*	*	*	*	*	*	*	*	*	*
STD	2.0	2.5	0.05	0.20	*	*	*	*	*	*	*	*	*	*	*	*
2-D, 3-D [g/test] = 2-day, 3-day diurnal and hot-soak																
RL [g/mi] = running loss																
ORVR [g/gallon of fuel dispensed] = on-board refueling vapor recovery																

BE IT FURTHER RESOLVED: That for the listed vehicle models, the manufacturer has attested to compliance with Title 13, California Code of Regulations, (13 CCR) Sections 1965 (labeling), 1968.1 or 1968.1(m)(6.2) (on-board diagnostic systems; full or partial compliance), 2035 et seq. (emission control warranty), 2235 (fuel tank fill pipes and openings), and "High-Altitude Requirements" and "Inspection and Maintenance Emission Standards" (California Exhaust Emission Standards and Test Procedures for 2001 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles).

Vehicles certified under this Executive Order shall conform to all applicable California emission regulations. The Bureau of Automotive Repair will be notified by copy of this Executive Order.

Executed at El Monte, California on this 3RD day of August 2001.

R. B. Summerfield, Chief
 Mobile Source Operations Division